Powered Subwoofer

SW988/00S

(3139 118 79380)

Service
Service
Service

Service Manual

Technical Specifications

Mains Voltage		: 230V
Mains Frequency		: 50Hz
Output Power (55Hz, 10% THD)		: 100W at 4 ohm load
Input Sensitivity (55Hz, 100W)		: < 220mV
S/N Ratio (100Hz, 200mV)		: > 60dB*
Minimum Volume Hum & Noise		: < 3mV
Frequency Response (-3dB)	Low	: <40Hz
	High	: 110Hz - 140Hz
Distortion (100Hz, 200mV)		: < 1%*

* at Output level of 2V across 4 ohm load

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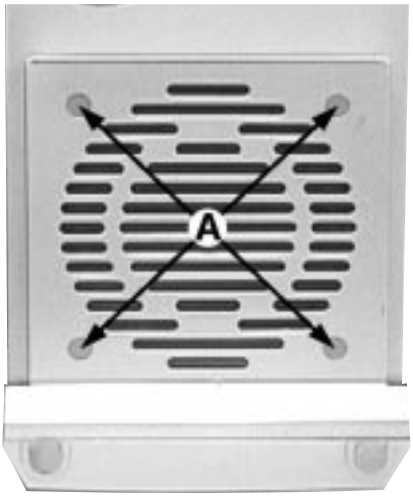
Version 1.0

PHILIPS

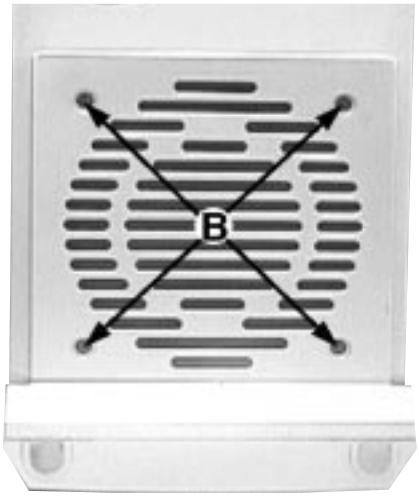
DISMANTLING INSTRUCTIONS

Dismantling the Grille Base & Speaker Driver

1. Place the Subwoofer Box upside down and remove the 4 Rubber Foot A (see Picture 1). Then unscrew 4 screws B (see Picture 2) to loosen the Grille Base (pos. 19).
2. Unscrew 4 screws C (see Picture 3) to remove the Speaker Driver (pos. 17).



Picture 1



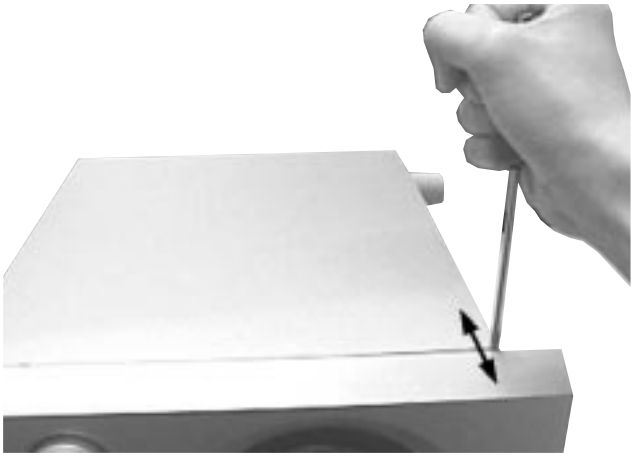
Picture 2

Picture 3

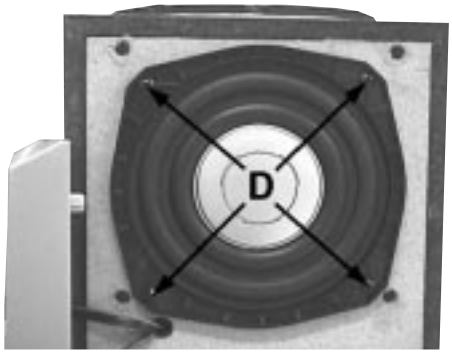
Dismantling the Front Assembly

1. Place the Subwoofer Box as shown in the Picture 4 and Picture 5 and use a screw driver (minus type) to force open the front assembly.
   Caution: Do not break the bundle of wires to the front.
2. Unscrew 4 screws D (see Picture 6) to remove the Woox Speaker (pos. 4).

Picture 4



Picture 5

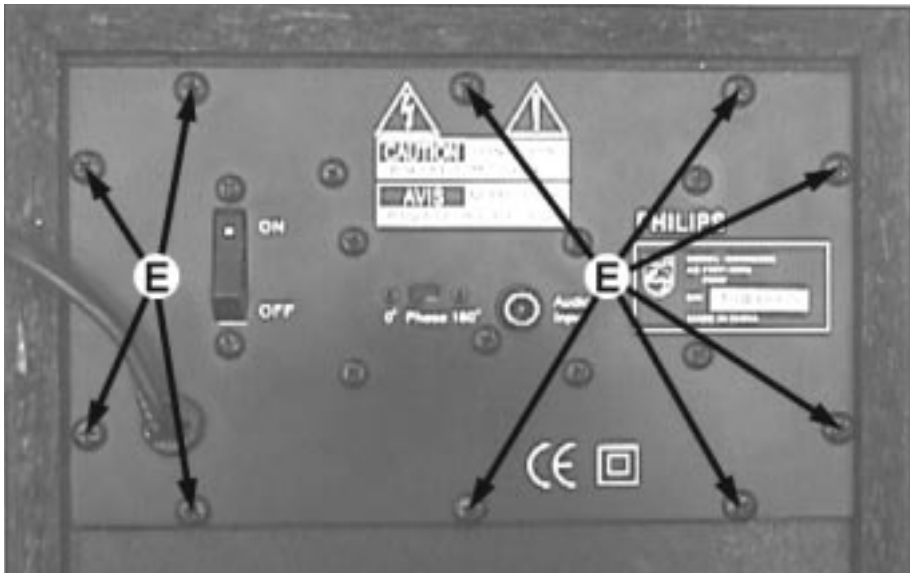


Picture 6

DISMANTLING INSTRUCTIONS

Dismantling the Rear Assembly

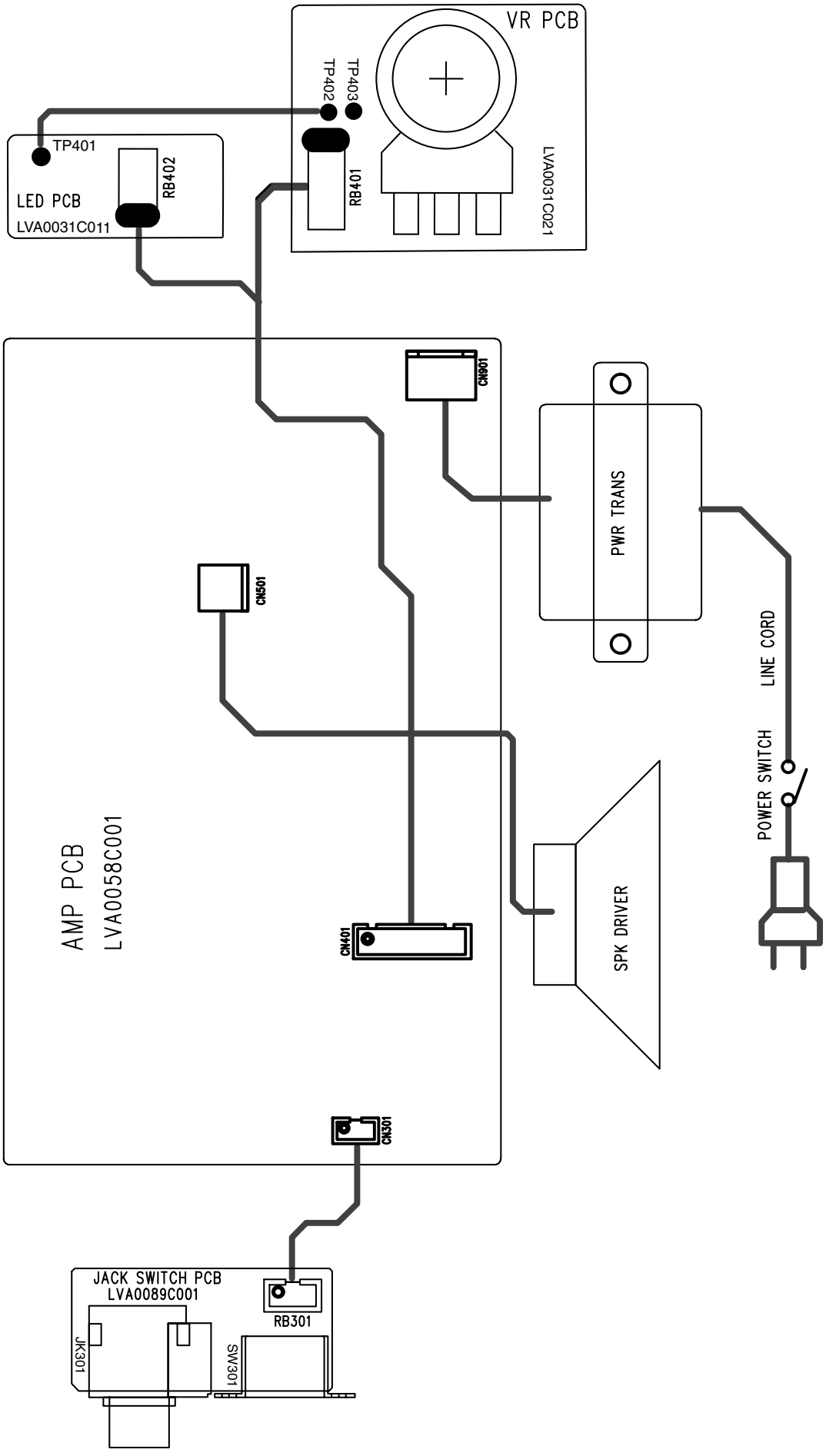
1. Unscrew 10 screws E (see Picture 7) to pull out the pc board assembly.
   Caution: Do not break the bundle of wires to the front.



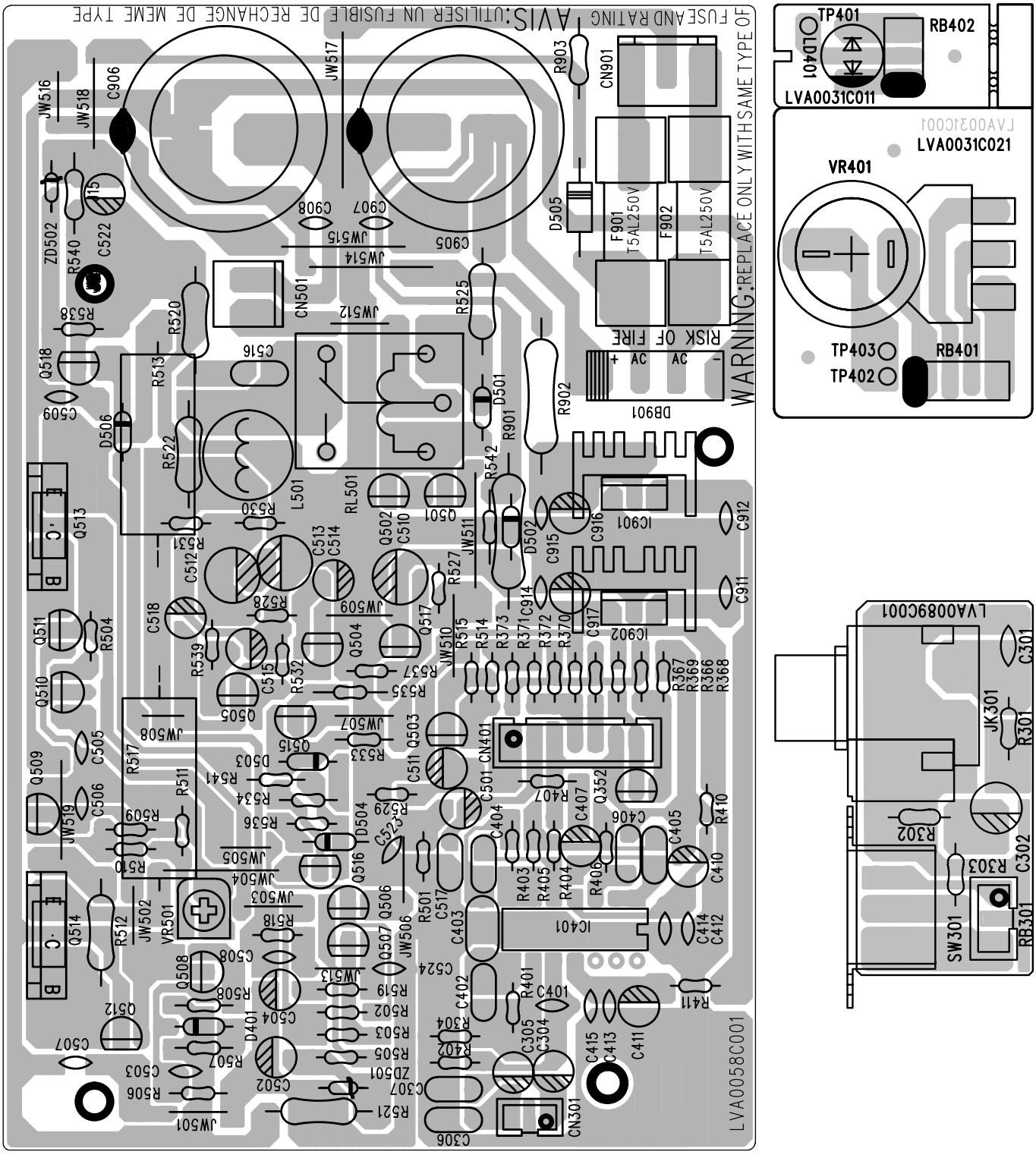
Picture 7

Service Position

WIRING DIAGRAM



COMPONENT LAYOUT



ELECTRICAL PARTS LIST

MISCELLANEOUS

F901	4822 070 35002	⚠	Fuse T5A 250V
F902	4822 070 35002	⚠	Fuse T5A 250V
JK301	4822 267 41238		RCA Jack 1P
L501	4822 157 71807		RF Coil 1µH
RL501	9965 000 09714		Relay SHINMEI
			RPA-12 V DC 10A(AC)250V
SW301	4822 277 11821		Slide Switch
VR401	9965 000 08282		Control Rotary 50kB

CAPACITORS

C301	4822 122 33293	100pF 5% 50V
C302	4822 124 21913	1µF 20% 63V
C304	4822 124 21913	1µF 20% 63V
C305	4822 124 21913	1µF 20% 63V
C306	9965 000 08287	0,22µF 5% 100V
C307	9965 000 08287	0,22µF 5% 100V
C401	4822 122 33293	100pF 5% 50V
C402	4822 121 41935	12nF 5% 250V
C403	5322 121 42662	68nF 5% 250V
C404	5322 121 42662	68nF 5% 250V
C405	5322 121 42489	33nF 5% 250V
C406	4822 121 42077	6,8nF 10% 400V
C407	4822 124 21913	1µF 20% 63V
C410	4822 124 23056	47µF 20% 16V
C411	4822 124 23056	47µF 20% 16V
C412	4822 122 30103	22nF 80% 63V
C413	4822 122 30103	22nF 80% 63V
C414	9965 000 03366	0,22µF +80/-20% 50V
C415	9965 000 03366	0,22µF +80/-20% 50V
C501	4822 124 22652	2,2µF 20% 50V
C502	4822 124 40207	100µF 20% 25V
C503	2038 554 00065	100nF +80/-20% 50V
C504	9965 000 09732	47µF 20% 35V
C505	9965 000 09731	270pF 10% 50V
C506	2038 554 00065	100nF +80/-20% 50V
C507	2038 554 00065	100nF +80/-20% 50V
C508	5322 122 32072	33pF 2% 100V
C509	2038 554 00065	100nF +80/-20% 50V
C510	4822 124 40248	10µF 20% 63V
C511	5322 124 41945	22µF 20% 35V
C512	4822 124 40207	100µF 20% 25V
C513	4822 124 40207	100µF 20% 25V
C514	4822 124 40248	10µF 20% 63V
C515	5322 124 41945	22µF 20% 35V
C516	5322 121 42578	100nF 5% 250V
C517	9965 000 08287	0,22µF 5% 100V
C518	9965 000 09733	47µF 20% 50V
C522	4822 124 40248	10µF 20% 63V
C523	5322 122 32331	1nF 10% 100V
C524	5322 122 32331	1nF 10% 100V
C905	9965 000 09715	4700µF 20% 63V
C906	9965 000 09715	4700µF 20% 63V
C907	2038 554 00065	100nF +80/-20% 50V
C908	2038 554 00065	100nF +80/-20% 50V
C911	2038 554 00065	100nF +80/-20% 50V
C912	2038 554 00065	100nF +80/-20% 50V
C914	2038 554 00065	100nF +80/-20% 50V
C915	2038 554 00065	100nF +80/-20% 50V
C918	9965 000 11041	0,01µF 20% 500V

RESISTORS

R301	4822 050 21003	10k 1% 0,6W
R302	4822 050 25602	5k6 1% 0,6W
R303	4822 050 21003	10k 1% 0,6W
R304	9965 000 09725	4,7k 5% 1/6W
R366	4822 050 21003	10k 1% 0,6W
R367	4822 050 21001	100R 1% 0,6W
R368	4822 050 21003	10k 1% 0,6W
R369	4822 050 21502	1k5 1% 0,6W
R370	4822 050 21502	1k5 1% 0,6W
R371	4822 050 22203	22k 1% 0,6W
R372	4822 050 25602	5k6 1% 0,6W
R373	4822 050 22702	2k7 1% 0,6W
R401	9965 000 08284	220k 5% 1/6W
R402	4822 050 25602	5k6 1% 0,6W
R403	9965 000 08285	18k 5% 1/6W
R404	4822 050 21504	150k 1% 0,6W
R405	9965 000 09724	3,9k 5% 1/6W
R406	9965 000 08285	18k 5% 1/6W
R407	4822 050 21503	15k 1% 0,6W
R410	4822 050 21001	100R 1% 0,6W
R411	4822 050 21001	100R 1% 0,6W
R501	9965 000 09727	56k 5% 1/6W
R502	4822 050 22702	2k7 1% 0,6W
R503	4822 050 22702	2k7 1% 0,6W
R504	9965 000 09726	51R 5% 1/6W
R505	4822 050 21503	15k 1% 0,6W
R506	4822 050 21503	15k 1% 0,6W
R507	9965 000 09726	51R 5% 1/6W
R508	9965 000 09726	51R 5% 1/6W
R509	9965 000 09723	3,6k 5% 1/6W
R510	9965 000 09728	750R 5% 1/6W
R511	9965 000 09729	820R 5% 1/6W
R512	9965 000 09720	300R 5% 1/2W
R513	9965 000 09716	0,22R 5% 5W
R514	4822 050 21003	10k 1% 0,6W
R515	4822 050 23303	33k 1% 0,6W
R517	9965 000 09716	0,22R 5% 5W
R518	4822 050 26803	68k 1% 0,6W
R519	4822 050 21502	1k5 1% 0,6W
R520	4822 116 81753	4R7 5% 0,5W
R521	9965 000 09721	3,9k 5% 1/2W
R522	4822 116 81753	4R7 5% 0,5W
R525	9965 000 09718	1k 5% 2W
R527	4822 050 26803	68k 1% 0,6W
R528	4822 050 21004	100k 1% 0,6W

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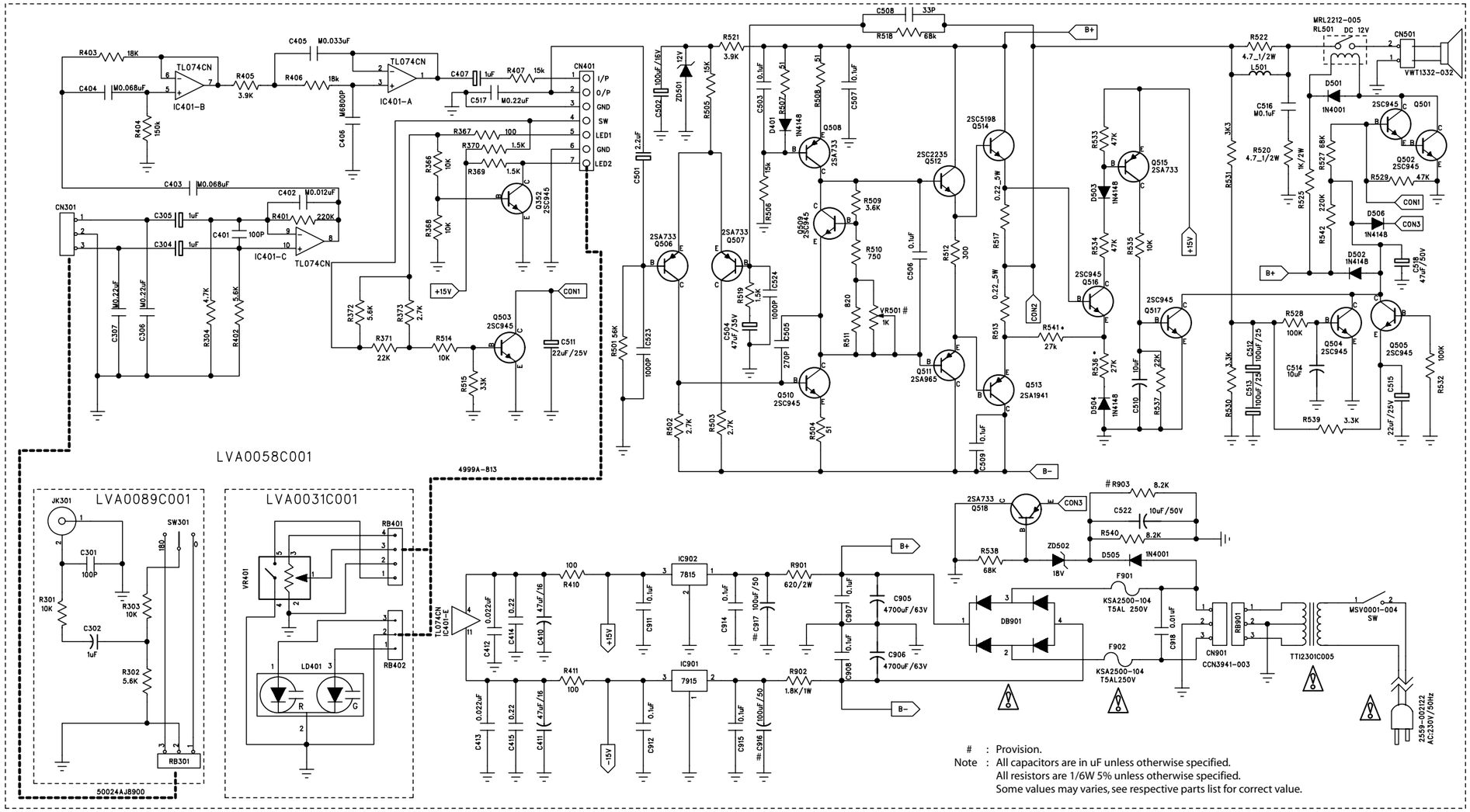
CIRCUIT DIAGRAM



ELECTRICAL PARTS LIST

RESISTORS

R529	4822 050 24703	47k 1% 0,6W
R530	4822 050 23302	3k3 1% 0,6W
R531	4822 050 23302	3k3 1% 0,6W
R532	4822 050 21004	100k 1% 0,6W
R533	4822 050 24703	47k 1% 0,6W
R534	4822 050 24703	47k 1% 0,6W
R535	4822 050 21003	10k 1% 0,6W
R536	9965 000 09722	27k 5% 1/6W
R537	4822 050 22203	22k 1% 0,6W
R538	4822 050 26803	68k 1% 0,6W
R539	4822 050 23302	3k3 1% 0,6W
R540	9965 000 09730	8,2k 5% 1/6W
R541	9965 000 09722	27k 5% 1/6W
R542	9965 000 08284	220k 5% 1/6W
R901	9965 000 09719	620R 5% 2W
R902	9965 000 09717	1,8k 5% 1W

DIODES

DB901	4822 130 70035 ⚠	Rectifier RS402L
D401	4822 130 30621	1N4148
D501	4822 130 31438	1N4001G
D502	4822 130 30621	1N4148
D503	4822 130 30621	1N4148
D504	4822 130 30621	1N4148
D505	4822 130 31438	1N4001G
D506	4822 130 30621	1N4148
LD401	4822 130 10236	LED Green/Red
ZD501	4822 130 34197	BZX79-B12

ELECTRICAL PARTS LIST

ZD502	4822 130 31024	BZX79-B18

TRANSISTORS & INTEGRATED CIRCUITS

IC401	4822 209 32742	TL074CN
IC901	4822 209 90748	AN7915T
IC902	4822 209 90747	7815
Q352	4822 130 41198	2SC945P
Q501	4822 130 41198	2SC945P
Q502	4822 130 41198	2SC945P
Q503	4822 130 41198	2SC945P
Q504	4822 130 41198	2SC945P
Q505	4822 130 41198	2SC945P
Q506	4822 130 63876	2SA733R
Q507	4822 130 63876	2SA733R
Q508	4822 130 63876	2SA733R
Q509	4822 130 41198	2SC945P
Q510	4822 130 41198	2SC945P
Q511	4822 130 63221	2SA965Y
Q512	4822 130 10235	2SC2235-Y
Q513	4822 130 10942	2SA1941-O
Q514	4822 130 10943	2SC5198-O
Q515	4822 130 63876	2SA733R
Q516	4822 130 41198	2SC945P
Q517	4822 130 41198	2SC945P
Q518	4822 130 63876	2SA733R

Note : Only the parts mentioned in this list are normal service spare parts.

EXPLODED VIEW

MECHANICAL PARTS LIST

1	9965 000 12141		Volume Knob
2	9965 000 12142		Bar Trim (Lens)
3	9965 000 12149		Front Cabinet
4	9965 000 12144		Woox Speaker
9	9965 000 09700		Foot
11	9965 000 09701		Foot D30X35mm
14	9965 000 09702		Rubber Pad
15	4822 532 13065		Speaker Sponge
16	9965 000 08277		Port Tube
17	9965 000 08278		Speaker Driver 100W 6,5" 4 ohm
18	9965 000 08279		Port Tube
19	9965 000 12145		Grille Base
21	9965 000 09704		Rubber Foot
35	9965 000 09705	⚠	Mains Cord
37	9965 000 07092		Bushing
39	9965 000 09707	⚠	SW Rocker 5A AC 250V TV-5
47	9965 000 09713	⚠	Power Transformer 230V/50Hz 100W
	9965 000 09734		RCA Cable L=3000mm

Note: Only the parts mentioned in this list are normal service spare parts.

SCREW LIST

6	M3 x 6
7	M3 x 8
10	M3.5 x 14
12	M4 x 28
13	M4 x 25
20	M3.5 x 28
27	M3 x 8
28	M3 x 12
33	M3 x 10
34	M2 x 6
36	M3 x 12
41	M3 x 6

8